Destination Segmentation: A Recommended Two-step Approach

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Abstract

Tourism segmentation studies have traditionally developed segmentation variables from secondary data or a review of the literature. Based on stakeholder theory, this study recommends a two-step approach to destination segmentation, incorporating the views of multiple stakeholders. This paper details the recommended segmentation approach using one Australian destination. Step one involved understanding how multiple stakeholders viewed their market to identify relevant segmentation variables. Step two involved segmenting the destination based on the variables identified in step one. When compared with segments currently used by the destination marketing organization, the segments derived from the two-step approach to segmentation captured more of the tourists visiting the area. Segmentation guides budgetary decision making and the proposed two-step approach to segmentation may assist tourism destinations to maximize limited resources by targeting more of the types of tourists who are frequenting the destination.

Introduction

Market segmentation has been widely acknowledged in the tourism marketing literature as a relevant marketing strategy (e.g. Bieger and Laesser 2002; Dolnicar 2007; Johns and Gyimothy 2002; Kolb 2006). Market segmentation research has assisted researchers to understand the ways that destinations can effectively segment tourism markets and thus identify and attract tourists from key target markets (e.g. Cha, McCleary and Uysal 1995; Dolnicar and Leisch 2003; Sarigollu and Huang 2005).

The majority of segmentation studies have emphasized building tourism profiles at a destination through using a visitor survey developed from studies in the literature (e.g. Horneman et al. 2002; Kim, Jogarantam and Noh 2006; McGuiggan and Foo 2004), or through using secondary data (e.g. Carmichael and Smith 2004; Jang, Morrison and O'Leary 2004; Laesser and Crouch 2006). Very little research has been conducted taking a stakeholder view to destination segmentation, despite many authors promoting the importance of utilizing a stakeholder approach for destination management and marketing purposes (e.g. Blain, Levy and Ritchie 2005; Fyall and Garrod 2005; Jamal and Getz 1995; Morgan, Pritchard and Piggott 2003; Sautter and Leisen 1999; Sheehan, Ritchie and Hudson 2007; Sheehan and Ritchie 2005).

This research will contribute to the tourism literature by proposing a two-step approach to segmentation. This paper details a two-step approach to segmentation using one Australian destination. Step one involved understanding how multiple stakeholders viewed their market to identify relevant segmentation variables. Step two involved segmenting the destination based on the variables identified in step one. In contrast to previous tourist-focused

segmentation studies, the two-step approach recommended and detailed in this study considers both tourism stakeholders and tourists. The segments derived from the proposed two-step approach are then compared and contrasted with the segments currently utilized by the destination marketing organization (DMO).

Stakeholder theory

Stakeholder theory, a management theory proposed by Freeman (1984), argues that the interests of all stakeholders are of intrinsic value (Donaldson and Preston 1995) to an organization. Freeman (1984, p. 46) argues that a stakeholder "is any group or individual who can affect or is affected by the achievement of the organization's objectives". This theory suggests that an organization that fulfils its stakeholders' interests will perform better than firms that do not address these groups' interests (Agle, Mitchell and Sonnenfeld 1999; Berman et al. 1999; Post, Preston and Sachs 2002). In tourism, this theory can be applied to a destination where many authors have identified different stakeholders (e.g. Sautter and Leisen 1999; Sheehan and Ritchie 2005; Sheehan, Ritchie and Hudson 2007). A destination is a region or place with a distinct image that has natural attractions such as climate, hydrology, topography and/or iconic attractions such as amusement parks and shopping facilities (Weaver and Lawton 2006). Destination stakeholders include hotels, restaurants, tour operators, government bodies, attractions, gas stations, retail outlets, city officials, transportation companies, incentive planners, airlines and/or universities (Blain, Levy and Ritchie 2005). Whilst the DMO is responsible for marketing a destination, it is rarely an operator of the product and is thus reliant on stakeholder support to successfully promote and market a destination (Pike 2004). If one of the key stakeholders (e.g. a transportation company) withdraws its support for the marketing of the destination, the destination may be threatened as a common approach is not being utilized (Clarkson 1995). For the DMO to ensure that various stakeholders support tourism marketing of the destination, it needs to ensure the needs and interests of stakeholders are met when selecting target markets (Sheehan, Ritchie and Hudson 2007). A two-step approach is conducive to

developing a holistic destination image and it may enable a destination to succeed in the long run by having a common goal and strategy at the destination level.

Market segmentation

Destination stakeholders recognize the importance of effective marketing strategies to the area's collective success with tourism. This can be difficult to achieve due to the self interest of stakeholders in fulfilling their own objectives. In addition, those responsible for marketing a destination (e.g. the DMO) need to acknowledge that every tourist is different and that the tourism industry cannot possibly cater for all individuals separately (Dolnicar 2007).

Segmentation is a marketing strategy (Smith 1956) that helps managers effectively market a destination (Dolnicar 2007; Pike 2005). Segmentation involves viewing a heterogeneous market as a number of smaller more homogeneous markets (Smith 1956). These smaller markets can be distinguished by different consumer needs, characteristics, or behavior (Kotler 1980). For segmentation to be managerially useful, each segment needs to be accessible, measurable and substantial (Kotler 1980).

A review of the literature indicates there is no one correct way to segment a market (Kotler 1980; Beane and Ennis 1987). Tourism researchers have applied as few as one and as many as four segmentation bases - geographic, demographic, psychographic and behavioral as described by Kotler (1980) - to segment markets. Several researchers (e.g. Andereck and Caldwell 1994; Johns and Gyimothy 2002; Lehto, O'Leary and Morrison 2002) have criticized the widespread use of demographic and geographic segmentation bases due to their inability to predict who will travel to a destination. However, other authors such as Cha, McCleary and Uysal (1995), Morrison et al. (1996) and Mudambi and Baum (1997) have

suggested these bases can be useful in predicting tourist behavior. Recently, Tkaczynski, Rundle-Thiele and Beaumont (2009) reviewed 119 destination segmentation studies and identified a mixture of the usage of geographic, demographic, psychographic and behavioral bases to segment markets. This review identified that less than 10 per cent of these studies employed only one or two segmentation bases. The use of two or three segmentation bases was most typical with 39 per cent of studies using three segmentation bases and 29 percent using two bases to segment a market. Twenty two percent used four bases to segment tourist markets.

We reviewed 119 academic studies[i] and identified that of the 84 per cent of studies that listed how their questionnaire was developed, the majority developed tourist profiles solely from the tourism marketing literature (39%) or by using secondary visitor data (35%). Few studies (8.4%) considered stakeholders' views. Further, the stakeholders that were considered (e.g. hotel and travel agency employees) were not decision makers for managerial and marketing purposes. The studies that employed a stakeholder approach are listed in Table 1.

INSERT TABLE 1 HERE

None of the studies that considered stakeholders when segmenting tourists involved more than two types of stakeholders. Therefore, preference has been given to certain types of stakeholders instead of considering a range of tourism stakeholders relevant to a destination (e.g. DMOs, accommodation providers, tour operators). It should be noted that the stakeholders that were considered in the reviewed studies (e.g. hotel and travel agency employees) were not destination decision makers for managerial and marketing purposes. Additionally, the studies in this review did not consider the different types of organizations at

a destination within the one stakeholder category (e.g. the different types of accommodation providers). As all stakeholder types are crucial for the continual operation of a destination, their insights into market segmentation may be useful for marketing and management purposes as they have been identified as knowledgeable about tourism at the destination and their tourist markets (e.g. Sautter and Leisen 1999; Sheehan and Ritchie 2005; Sheehan, Ritchie and Hudson 2007).

Two-step segmentation approach

To date, little segmentation research has explicitly reported consideration of tourism stakeholders. Only 8 per cent of the 119 academic studies reviewed explicitly referred to tourism stakeholders and no more than two tourism stakeholders were considered in any single study. Multiple stakeholder viewpoints would allow researchers to become more familiar with, and hence knowledgeable about, the destination under study. Unless the researcher has a complete understanding of tourism stakeholders, some variables that may be important to tourism stakeholders may be overlooked (examples might include different types of expenditure or activities sought). The variables generated in these studies are likely to be guided by the researcher's own experience and their review of the literature. Such endeavors may not sufficiently accommodate the variation within a single tourism destination. For example, five star hotels at a destination attract certain types of tourists while backpacker hostels attract a completely different cohort. It is also noted that, whilst some studies have employed a stakeholder perspective, multiple stakeholders with decision making responsibilities have not been considered. As several authors (e.g. Blain, Levy and Ritchie 2005; Sautter and Leisen 1999; Sheehan and Ritchie 2005) have argued, many stakeholders are influential in marketing a destination.

A two-step approach is an approach to segmentation that considers two points of view. The two-step approach to segmentation proposed here requires consideration to be given to both 1) tourism stakeholders and 2) tourists. Segmentation researchers have not considered tourism stakeholder views and to date a two-step research design utilizing a multiple stakeholder and visitor perspective has not been applied in tourism segmentation research. These observations provided the impetus for the study. The proposed two-step approach is described in this study.

In the first step a case study with semi-structured interviews was employed to identify how tourism stakeholders segment their market. Variables identified by stakeholders were used to construct a survey for administration to tourists in the second step. Finally, the segments derived from the proposed two-step approach to segmentation were compared and contrasted with the segments currently identified by the DMO for destination marketing purposes.

Step one – Destination stakeholder case study

A case study method was utilized for the first step of the research. The methodology used in step one is detailed in Tkaczynski, Rundle-Thiele and Beaumont (2009). A case study method was chosen for step one as it has been has been widely utilized by researchers seeking to understand marketing phenomena (e.g. Awaitefe 2004; Prideaux and Cooper 2002; Sheehan, Ritchie and Hudson 2007). This technique permits researchers to investigate complex issues in some depth (Yin 2003). A single case study of one Australian destination was deemed most appropriate to ensure that an in-depth understanding of market segmentation from a tourism stakeholder perspective was obtained (Lee 1999). Efforts were made to include participants from a wide cross section of the tourism stakeholders in the destination to maximize variation among stakeholders. Thirteen interviews were conducted with the local government organization, DMOs (regional and state), accommodation providers, and tour operators. The accommodation providers were a backpacker resort, caravan park, self-contained unit provider, and a low, a medium and a high star rating hotel. The tour operator stakeholders consisted of a whale watching operator, a fishing charter operator, an adventure tour operator, and a museum. Further detail on the selection of interviewees and the data analysis methods and findings are detailed in Tkaczynski, Rundle-Thiele and Beaumont (2009).

To identify how various tourism stakeholders segment their tourist market, the 13 tourism stakeholders were asked to describe how they segmented the market. In instances where formal marketing plans were not employed, probes were applied to understand whether the market was approached as a whole or in parts (segments). It was identified that the stakeholders segmented their markets differently. Key findings were that four segmentation bases as identified by Kotler (1980) were identified by destination stakeholders as relevant for segmenting tourists visiting the destination. Specifically, tourism stakeholders identified 13 variables they felt were relevant for segmentation purposes, namely *age, gender, travel party composition (TPC)*, *income, education* (demographic), *location* (geographic), *trip purpose, push motivations, pull motivations, activities* (psychographic), *expenditure, number of nights*, and *purchasing behavior* (behavioral). The results of step one are elaborated in Tkaczynski, Rundle-Thiele and Beaumont (2009).

Step two – Tourist survey

A survey was then developed to enable data to be collected from tourists visiting the destination for each of the 13 variables identified by the destination stakeholders in step one. The survey was written in English. Some modifications were made from the semi-structured interviews. Purchasing behavior and expenditure were combined to form three expenditure variables: *activities expenditure*, *food and beverages expenditure* and *accommodation expenditure*. This modification was needed as the destination stakeholders knew that tourists spent their money on these items, but did not know the amount. These variables represent different aspects of tourists' expenditure at the destination and, consistent with other studies

(e.g. Hong et al. 2005; Lehto, O'Leary and Morrison 2004; Wilson and Thilmany 2006), we decided to treat them separately.

As motivations have been frequently identified in the tourism marketing literature (e.g. Baloglu and Uysal 1996; Cha, McCleary and Uysal 1995; Kim and Lee 2002) and are part of past travel surveys at the destination, motivations based on these sources were included in the survey. Both push and pull motivations were chosen as they represent different aspects of a tourist's motivation (Dann 1981; Baloglu and Uysal 1996; Yuan and McDonald 1990).

Thirty-nine questions were used for this questionnaire. *Activities sought*, *push motivations*, *pull motivations* and *nights* were treated as continuous variables based on the interview responses. The first three variables were measured in a binary 'yes' or 'no' format and 'yes' responses were summed to calculate a number for each variable. This format has been used for activities (e.g. Dolnicar 2004a; Lee et al. 2006; Morrison et al. 2003) and motivations (e.g. Dolnicar 2004b; Kim, Wei and Ruys 2003) in the literature. The possible activities sought were identified from the semi-structured interviews. Six were considered. In total, 11 push and 12 pull motivations were measured. Nights required the respondent to specify the number of nights they had stayed or were planning to stay at the destination. Average length of stay has been used in past studies (e.g. Alipour et al. 2007; Becken, Simmons and Frampton 2003; Hsu and Kang 2007).

Nine of the questions, *age, gender*, *travel party composition (TPC)*, *income, location*, *trip purpose*, *accommodation expenditure, activities expenditure*, and *food and beverages expenditure* were designed as categorical variables, as the stakeholders explained these

variables based on the different categories. It was also identified in the review of the 119 destination segmentation studies that categories were commonly used for these variables.

Consistent with prior studies, six categories were chosen to capture age (e.g. Hsu, Kang and Wolfe 2002; Johns and Gyimothy 2002; Yoo, McKercher and Mena 2004) and household income (e.g. Bonn, Joseph and Dai 2005; Kang, Hsu and Wolfe 2003; Pike 2002) of respondents. For gender, respondents needed to indicate whether they were male or female. Consistent with prior research (e.g. Becken, Simmons and Frampton 2003; Dolnicar and Laesser 2007; Morrison et al. 2003), travel party composition was categorized into five groups. Similar to the tourism literature (e.g. Hong et al. 2005; Onyx and Leonard 2005; Park et al. 2002), the origin of tourists were classed into categories once all were identified. The four most popular trip purpose options from the interviews were chosen. With reference to the literature (e.g. Diaz-Perez, Bethencourt-Cejas and Alvarez-Gonzalez 2005; MacKay, Andereck and Vogt 2002; McCleary, Weaver and Meng 2005), five categories were used to identify the three daily expenditure variables.

Tourist survey data collection

The sample population for this study was tourists at the destination under study. Respondents needed to be over 18 and had or would have spent at least a night in the chosen destination. The tourists also needed to have made the choice to visit the destination for a purpose other than business/work. This was justified as the results were to be compared to the type of visitor segments targeted by the DMO.

A sample size of at least 500 needed to be collected to provide a 95 per cent confidence level so that results could be generalized to this tourist population (Veal 2005). To obtain this minimum sample size, the questionnaire survey was conducted using a cross-sectional study design over a seven month period from July 2007 to January 2008. By using this design, the seasonality at the coastal destination was not a limitation, as the data was collected during the different seasons, catering to the high and low tourist times.

A non-probability sampling method in the form of quota sampling was utilized. Whilst research bias is a concern, probability sampling was impossible as a list of sampling units with a known probability was unable to be verified (Aaker, Kumar & Day 2003; Veal 2005). The regional tourism authority (DMO) has primary markets that it targets, but every type of tourist that travels to this region is not known. Researchers of non-probability sampling argue that it can readily be used in the exploratory stages of research (Aaker, Kumar & Day 2003; Malhotra 2004) which is essentially what this research represents. To ensure that a large enough group of respondents was targeted, at least 120 surveys were collected each month. This allowed monthly comparisons to be made.

In researching the destination, the researcher considered popular locations where tourists of all different demographics may be during the beginning or the end of their holiday. By choosing many locations, this ensured that a dominant location was not chosen which may have biased results (Veal 2005). The respondents were identified as a 'first past the post' sampling method (McKercher and Wong 2004). Thus, people who were there at the time were approached by the researcher to complete an on-site survey.

Questionnaires were collected at accommodation places, such as a caravan park, a backpacker hostel and a five star resort, at a visitor information centre, and at transport locations, such as the bus terminal, the ferry terminal and the airport. A minimum of eight responses each month were collected from each location to ensure that a specific type of tourist that was the most easily accessible did not dominate the results. In over 97 per cent of the situations a researcher was present to distribute and collect the questionnaire. Several questionnaires were left in the lobby at the accommodation places and the main seating area of the visitor information centre. In these instances approximately 20 questionnaires were completed, indicating a very low response rate without a researcher present. The time spent at each location to collect the responses varied. The researcher spent whole days at the accommodation places to achieve the quotas, whereas only one hour was necessary at the airport. It is noted that the largest quota of responses was collected at the airport terminal, as these respondents had the highest acceptance rate for completing the questionnaire. Tourists with different demographics, geographics, psychographics and behavioral tendencies also used this similar transport mode which ensured that a diversity of tourists could be targeted at this location. In total 84.9 percent of tourists approached chose to complete the questionnaire.

Tourist survey data analysis

Data collected in the survey were analyzed using the Statistical Package for the Social Sciences (SPSS) Version 15.0 (SPSS 2007). TwoStep® cluster analysis using the log-likelihood measure was used to reveal natural groupings in the data set using all of the segmentation variables identified in the case study methodology. In the review of the 119 studies, it was identified that 69.2 per cent chose cluster analysis to profile tourists. Most have employed factor analysis to reproduce items in subsequent analysis, followed by cluster analysis (43.7% of the 119 reviewed studies). Other studies have employed only cluster analysis (e.g. Beh and Bruyere 2007; Bieger and Laesser 2002; Dolnicar and Leisch 2003; Hyde 2006; McKercher et al. 2003). Another method was the usage of self organizing neural networks (e.g. Bloom 2004; Dolnicar 2004a; Kim, Wei and Ruys 2003). The authors have only noted two prior usages of TwoStep® cluster analysis to segment tourists at a destination (Hsu, Kang and Lam 2006; Laesser, Crouch and Beritelli 2006). TwoStep® cluster analysis was considered most appropriate for this research as it is the only type of cluster analysis in SPSS that forms clusters based on both continuous and categorical data (Chiu et al. 2001; Norusis 2008). Data transformation prior to analysis was therefore not required. TwoStep® cluster analysis permits researchers to retain full information providing rich explanation for managerial decision making purposes. In addition, TwoStep® cluster analysis is suitable for a large data set (n = 852 in this study) (Hsu, Kang and Lam 2006).

TwoStep® cluster analysis involves two stages. In the first step, original cases are grouped into preclusters by constructing a cluster features tree (Okasaki 2007). In the second step, the standard hierarchical clustering algorithm on the preclusters is used (Norusis 2008). Forming clusters hierarchically lets the researcher explore a range of solutions with different numbers

of clusters (Norusis 2008). This produces a range of solutions which is then reduced to the best number of clusters on the basis of Schwarz's Bayesian information criterion (BIC). The BIC is considered one of the most useful and objective selection criteria, as it avoids the arbitrariness of traditional clustering techniques (Chiu et al. 2001; Norusis 2008). In considering which variables to remove from the analysis, the one with the lowest BIC is preferred (Norusis 2008). Once the cluster solution is formed, chi-square tests are conducted for categorical variables and student t-tests for continuous variables to examine the importance of individual variables in a cluster (Norusis 2008). If the absolute value of the statistic for a cluster is greater than the critical value, the variable is considered important in distinguishing that cluster from the others (Norusis 2008).

Results

Identification of segments

The TwoStep® cluster analysis was used to form the clusters based on the segmentation variables identified by tourism stakeholders in stage one of the research. It was identified that 283 cases had missing data. Cluster analysis was performed on both the full data set and a data set that had all cases with missing data removed. The solution with missing data cases omitted produced a smaller BIC and a relatively large range of BIC change and distance. It was, therefore, decided to remove cases with missing data. Key statistics are reported in Table 2.

INSERT TABLE 2 HERE

Three clusters were revealed within the tourism data set. Three of the variables, *gender*, *number of activities* and *trip purpose*, did not distinguish clusters and were removed from the analysis. Cluster analysis was performed once again with the ten variables that were capable of distinguishing between segments. Three clusters were revealed with a smaller BIC value and a lower BIC change and distance measure. A cluster solution with 10 segmentation variables was accepted as the final solution (see Tables 3 and 4). Student t-tests and chi-square tests confirmed that each of the ten variables varied between clusters.

INSERT TABLE 3 HERE

INSERT TABLE 4 HERE

The first cluster is the largest (40.9%). The majority of people in this segment earn over $100,000 a year and travel from New South Wales (NSW). Tourists in this segment are primarily aged between 25-54. These tourists travel as a couple or as a family and they stay on average four nights. Of the three clusters, this segment spends the most on a daily basis with over $100 for daily accommodation and $50-$149 for both daily activities and food and beverages expenditure. This segment has roughly four push motivations and one pull motivation. The most popular push motivation was "*to rest and relax*" and "*the weather*" pulled tourists most frequently to the destination. The key distinguishing feature of this segment is the higher income and daily expenditure. This cluster was, therefore, labeled *wealthy travelers*.

The second cluster is virtually the same size (39.4%). This segment is young with the overwhelming majority aged under 35. This segment earns the least and travels predominantly from Europe. The cluster spends less per day when compared with the wealthy traveler segment with under $50 being the most popular option for all three expenditure categories. Approximately half of this segment travel as an adult group. This segment stays for 3-5 nights. This segment has the most push motivations and the fewest pull motivations. "*It was recommended by someone*" was the dominant pull motivation and "*to go to a place you have not been before*" was the most popular push motivation. The key distinguishing features of this segment is that the tourists are young and travel from Europe. Due to these features, this segment is labeled *young Europeans*.

The third cluster is the smallest and represents approximately 20 per cent of the tourism data set. These tourists are older with more than half being aged over 55. The income of this segment was approximately evenly distributed across the six categories. This segment largely

comprises domestic travelers with Queensland (QLD) the dominant origin (41.1%). These tourists travel as a couple and stay the longest, an average 17 nights. They have the lowest number of push motivations and the highest number of pull motivations. This segment also travels "*to rest and relax*" and is pulled by "*the weather*" and "*to experience a relaxed lifestyle*". This segment is distinguishable based on its long length of stay. This segment was, therefore, labeled *long stay travelers*.

To validate the model, the tourists were sorted based on the month of when the survey was collected. The month was considered the most effective option as it enabled both data sets to contain tourists from both the high (e.g. Christmas period) and low seasons (e.g. mid-year). Combining months also ensured that month of data collection did not bias the sample. Three odd-numbered months (n = 253) and three even-numbered months (n = 246) were chosen to split the file evenly. As can be seen from Table 2, both models produced a similar BIC value, BIC change and ratio of change. It was identified that the size of the segments varied very little. It was also noted that the split files accurately represented the final solution with only minor changes identified. On this basis, it was concluded that the three-cluster solution was validated for this study (Hair et al. 2006).

Comparison to DMO segments

The segments derived from the two-step approach were then compared with the primary segments that have been identified by the DMO as set out in Table 5 (Tourism Queensland 2007). The DMO segments were identified through a combination of tourism research[ii] and market intelligence by Tourism Queensland in coordination with Tourism Australia. According to Tourism Queensland (2007) these segments represent the tourists who have the

greatest potential to be converted into visitors to the region, and therefore, a high chance of providing a positive return on investment in marketing activities. Young parents (family) and older tourists (aged 45 and over) with an annual household income of $60,000 dominate the segments that are currently described by the DMO.

The DMO also identifies two international markets that are believed to have the most potential to convert into visitors (Tourism Queensland 2007). No research has been conducted by the DMO, and these markets are based on information from Tourism Australia, the national tourism organization. The first segment is classed as the international drive market (size is estimated at 360,000 for all of QLD). This segment travels to fulfill an inner drive to challenge themselves. This group travels from the United Kingdom (UK), Germany, United States of America (USA), Europe and New Zealand (NZ). The second international market is the youth and backpacker market (size is estimated at 320,000 for all of QLD) which travels for the same reasons as the international drive market. This segment travels from the UK, Germany, USA and Europe. The youth and backpacker market is considered secondary to the drive market (Tourism Queensland 2007).

The DMO and state tourism organization, in partnership with other local tourism stakeholders such as the regional council, market the destination to potential tourists (Tourism Queensland 2007). Minimal funds are available and have to be allocated carefully. In recent years one-off campaigns have been used to target both intrastate and interstate tourists. For example, a $400,000 five week integrated campaign was run in Sydney (NSW) following the introduction of direct flights from Sydney to the destination in July 2005. This campaign employed television, print, and online media to target interstate tourists.

On an international level, the destination participates in several marketing initiatives. This includes the Journalists Program for international journalists which showcases the region's main features to self-drive tourists (Tourism Queensland 2007). The destination is also part of other state-wide marketing promotions such as 'Brand Queensland'. Additionally, the destination's tourism products are currently featured in brochures distributed in Austria, France, Germany, Italy, Japan, Netherlands, NZ, Scandinavia, Singapore, South Africa, Switzerland, UK, USA and Canada (Tourism Queensland 2007).

INSERT TABLE 5 HERE

Mode of transportation and lifestage were not identified as a segmentation variable in the two-step approach to segmentation. Further, the three expenditure items (behavioral) and two motivations variables (psychographic) were not utilized in the DMO segmentation. The DMO segmentation uses three forms of segmentation being demographic (lifestage, age, and household income), geographic (source market) and behavioral characteristics (travel party, transport, and type of trip). The segments derived from the proposed two-step approach use all four segmentation bases. It was also noted that whilst the DMO segmentation emphasizes the lifestage and source market segmentation variables, the cluster solution treats each of the 10 segmentation variables equally.

The wealthy traveler segment compares favorably with the DMO segments that travel from Sydney and Brisbane (segments 1, 2 and 5). The wealthy traveler segment has tourists that originate from NSW (whose capital is Sydney) and QLD (whose capital is Brisbane). This segment is also aged between 25-54, which are the ages included in these three DMO segments. Wealthy travelers also travel predominantly as a couple or a family and stay for a

short break (roughly half a week). Additionally, over 75 per cent of the wealthy travelers earn a household income in excess of $60,000 per annum which is similar to the three segments.

The DMO treats international and domestic tourists separately. While segments are used for domestic marketing, segments are not used for international marketing. Due to the difference in focus, the young European segment was not described by the DMO. Despite representing one-fifth of the tourist market and the longest staying segment, the long stay traveler segment was not defined by the DMO. A further point of difference was that the third and fourth segments of the DMO were not identified when the two-step approach to segmentation was used.

Further analysis of the segments generated from the recommended two-step approach to segmentation was undertaken. The DMO segments were compared to the three segments identified using the two-step approach to segmentation. Any tourists with distinguishing characteristics not described in the DMO segments were eliminated from the data file to understand how many tourists were not being described by the five DMO segments. This occurred as follows. First, tourists that were not from within QLD or Sydney (NSW) were removed from the data file. This resulted in 625 cases being deleted and produced a data set of 227 which is just over a quarter of the original sample (26.6%). Secondly, tourists that travelled as singles were deleted from the data file as this category was not considered by the DMO when segmenting tourists based on their travel party. This resulted in 12.8 per cent of the 227 cases being deleted, which left a tourist market of 198 tourists. The proposed two-step segmentation method captured 569 of the 852 tourists, which represents 66.8 per cent of the tourism data set, while the segments currently used by the DMO targeted 198 tourists, which represents just 23.2 per cent of the tourists in the study sample.

By considering all tourists travelling to the destination, the two-step segmentation approach encompassed more tourists. Approximately two-thirds of the tourists travelling to the destination were cluster analyzed in this study whereas the DMO segments focused on less than half the tourists travelling to the destination. From a marketing and managerial approach, the two-step approach ensures that a more holistic view of tourists at the destination can be obtained.

Discussion and Conclusions

Stakeholders play an important part in marketing a destination to potential tourists (Sautter and Leisen 1999; Sheehan, Ritchie and Hudson 2007; Sheehan and Ritchie 2005). Collaborative efforts between tourism stakeholders and the DMO are required to maximize DMO and other tourism stakeholders' resources (Sheehan, Ritchie and Hudson 2007). Failure to develop a collective approach to marketing is likely to disadvantage destinations promoting themselves in a competitive market place, as stakeholders that are excluded from the marketing of the destination may not support the destination's marketing (Blain, Levy and Ritchie 2005; Prideaux and Cooper 2002; Sheehan, Ritchie and Hudson 2007). Instead, these stakeholders may promote their organization and destination separately from the DMO. For the best return on investment the DMO needs to attract the same tourist segments that various tourism stakeholders seek to attract once they have reached the destination.

Two-step approach to segmentation

This paper proposed a two-step approach to segmentation. Many contributions to the literature and practice were identified from this research. From a theoretical perspective, the first major contribution is that all four segmentation bases as defined by Kotler (1980) were identified using this approach. This confirms the findings from the literature (e.g. Beh and Bruyere 2007; Carmichael and Smith 2004; Chang 2006) that multivariate segmentation is preferable. In this study, age, income, TPC (demographic), origin (geographic), push motivations, pull motivations (psychographic), activities expenditure, food and beverages expenditure, accommodation expenditure, and nights (behavioral) produced three segments.

From a practical perspective, this two-step approach is applicable for simultaneously segmenting all tourists travelling to a destination. By interviewing relevant stakeholders, this research was able to first identify the segmentation variables relevant to tourism stakeholders.

Comparison to DMO segments

While surveys were used for both the DMO segments and the proposed two-step approach, the tourist segments that were derived varied considerably. Only one of the segments identified in this study, wealthy travelers, was comparable with the segments currently defined by the DMO. The other two tourism segments identified from the two-step approach, young Europeans and long stay travelers, were not considered in the DMO segmentation. These segments represent approximately 60 per cent of the usable tourist sample for this study.

We contend that the two-step approach may be a more appropriate segmentation method, as it is capable of assisting tourism marketers to target more of the tourists frequenting the destination. Currently, the DMO segments target less than a quarter of the types of tourists visiting the destination. Whilst the emphasis on wealthy travelers is relevant, young Europeans and long stay travelers also need to be considered. Young Europeans and the long stay travelers have different distinguishing characteristics to each other and the wealthy traveler segment (e.g. different ages and travel party compositions). These two segments also represent a large share of the market.

The inclusion of stakeholders in planning is considered beneficial in many organizational settings (Agle, Mitchell and Sonnenfeld 1999; Berman et al. 1999; Post, Preston and Sachs

2002). It is, therefore, crucial that segments relevant to all stakeholders are considered and ultimately targeted. The segments to prioritize should be chosen at the discretion of the tourism stakeholders. For this study, emphasizing only wealthy travelers is likely to isolate the tourism stakeholders that wish to target the tourists with less daily expenditure (e.g. backpacker hostels, caravan parks, certain tour operators) from the other stakeholders (e.g. five star resorts). If the destination marketing strategy is based on targeting the higher end tourists, these stakeholders focusing on the lower earning and spending tourists are, therefore, likely to design their own marketing strategies to attract their potential tourists (Buhalis 2000) leading to a segregated, and hence less effective, approach.

An additional contribution arising from this study is that the two-step approach provides a much richer description of the segments when compared to the current DMO segments. This richness can be applied to better frame management thinking. Geographic and demographic data can be used to select relevant media while behavioral and psychographic variables can be utilized by tourism stakeholders to tailor tourism product offerings and pricing and to inform promotion development. For example, knowledge that 80 per cent of long stay travelers reside on the eastern seaboard of Australia can be used by the DMO. Armed with this knowledge the DMO would focus communication aimed at the long stay traveler segment on eastern seaboard media which specifically targets people 55 years and over.

No psychographic variables were applied within the DMO segmentation, but push and pull motivations were clear descriptors for the two-step approach as the number of motivations varied between segments. For each segment, motivations were multidimensional, which confirmed the literature (e.g. Baloglu and Uysal 1996; Bieger and Laesser 2002; Dolnicar

2004a; Sirakaya, Uysal and Yoshioka 2003). In contrast to previous studies, the method used in this paper enabled both the number and types of motivations to be considered.

A final contribution of this research is use of three expenditure items that produced findings of primary importance to tourism stakeholders. Economic injection is one of the main benefits to destination stakeholders at a destination (Gunn and Var 2002; Swarbrooke and Horner 1999; Weaver and Lawton 2006). Despite the DMO using income as a characteristic of the five segments, it was identified that higher income did not automatically translate to higher expenditure. This finding confirms previous studies (e.g. Carmichael and Smith 2004; Hu and Yu 2007; Lee, Morrison and O'Leary 2006; Petrick 2005; Sung 2004). For example, Carmichael and Smith (2004) identified that a segment, *shopping enthusiasts*, spent more at a shopping destination despite not having the highest income. Tourists with higher incomes do not necessarily spend more while at the destination. It was identified that whilst the long stay travelers had an annual household income that was generally higher than the young Europeans, their daily expenditure was lower. This study shows that both income and expenditure need to be considered as variables when considering the financial activity of tourists at a destination.

Managerial Implications

Recent domestic marketing efforts by the DMO currently targeted approximately one quarter of tourists traveling to the destination. A substantial segment that was identified using the two-step approach to segmentation was young Europeans. DMOs have the objective of attracting visitors to a destination. Use of a two-step approach to segmentation suggests that some funds could be redeployed away from targeting tourists around the age of 45 years old residing in QLD and Sydney towards European travelers. Redeployment of funds would assist the DMO to improve return on investment as the funds would be spent in areas where tourist response is more likely. It is argued that because this destination does not have the funds to advertise internationally to the continent of Europe, funds could be used to target these European tourists in popular Australian tourist destinations such as Cairns, Melbourne and Sydney. As these tourists tend to spend very little on accommodation, it would be considered appropriate to promote the destination in backpacker hostels at nearby destinations. In addition, as a major pull motivation was "*it was recommended by someone"*, it may be useful to contact tourist guides in the regions or promote in international traveler guides such as the Lonely Planet.

As the other segment, long stay travelers, represents tourists that may be considered 'grey nomads' defined as "over-55s who travel independently in caravans, motorhomes, campervans or converted buses for between three months and three years" (Robson 2007), it may be useful to promote the destination in caravan parks throughout Australia. This segment spends the least on the three expenditure items on a daily basis, but their length of stay is on average four times the other segments. Accordingly, their overall expenditure is the highest and this makes them a valuable market for the destination. Focusing on this segment also

ensures that the issues of seasonality at the destination can be minimized, as these tourists can choose to stay at the destination for long periods during the low peak seasons. As "*to rest and relax*" (push) and "*the weather*" and "*relaxed lifestyle*" (pull) are popular motivations for this segment, these characteristics of the destination need to be considered when promoting to these tourists.

Limitations and future research

This study considered one Australian destination. Future research is recommended in a range of alternate destinations to further our understanding of the recommended two-step approach to segmentation. Future research is required in urban destinations and other regional destinations. Additionally researchers could consider the usefulness of the two-step segmentation approach for state and country level marketing efforts. Such endeavors would require additional rigor in the first stage as considerably more stakeholders would be involved.

This research was conducted using a cross-sectional research design. Future research should be conducted longitudinally to see if the segments described by the proposed two-step approach are better able to predict the types of tourists travelling to the destination. Another limitation arising in this research is that some of the categories within this research could have been expanded. It was acknowledged that Europe is a large source market, which represents many countries with populations in excess of 20 million people such as the UK, Spain, France and Germany. Identifying if the majority of tourists come from one country, region or state has marketing implications. Designing specific packages for tourists from European countries such as the UK or Germany may increase the growth of tourism from these countries to this destination. As many wealthy tourists travel from Europe, this could be a financially attractive option.

The use of the TwoStep® clustering method was only noted twice before in tourism research. The TwoStep® clustering method was selected to segment tourists in stage two due to its ability to simultaneously consider categorical and numeric variables. Research is required to

compare clustering methods for tourism segmentation. This would require researchers to cluster using the new TwoStep® clustering method and then cluster the same data set using more traditional clustering methods.

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TABLE 1
USE OF STAKEHOLDERS

	Stakeholders						
Author	Funding Agency	Hotel Employees	Residents	Travel Agency Employees	Industry Experts	Attraction Employee	Number of stakeholders considered
Bigne and Andreu (2004)						√	1
Hsu, Kang and Wolfe (2002)					√		1
Hudson and Ritchie (2002)			√				1
Juwaheer (2007)		√					1
Kang, Hsu and Wolfe (2003)	√						1
Kim, Wei and Ruys (2003)					√		1
Lee, Yoon and Lee (2007)						√	1
Lee et al. (2006)					√		1
Lee & Zhao (2003)		√		√			2
Obenour, Lengfelder and Groves (2005)					√		1

TABLE 2
CLUSTER SELECTION WITH BIC VALUES

Model	Number of clusters	Schwarz's Bayesian Criterion (BIC)	BIC Change[a]	Ratio of BIC Changes[b]	Ratio of Distance Measures[c]
Initial solution (All cases, 13 segmentation variables)	3	14,280.518	-395.950	.413	1.719
Missing solution (283 missing cases removed, 13 segmentation variables)	3	14,186.355	-.467.317	.476	2.159
Final solution (Cases with missing data removed, 10 segmentation variables)	3	11,961.731	-.418.615	.415	1.919
Odd-numbered solution	3	5,537.972	-123.793	.315	1.703
Even-numbered solution	3	5,476.333	-.108.051	.361	1.398

a. Changes are from the previous numbers of clusters in the table.
b. Ratios of changes are relative to the change for each of the three-cluster solutions.
c. Ratios of distance measures are based on the current number of clusters against the previous number of clusters.

TABLE 3
FINAL CLUSTER SOLUTION

	Total		Wealthy Travelers		Young Europeans		Long Stay Travelers	
Segment Size	N = 569		N = 233		N = 224		N = 112	
Segment %	100.0		40.9		39.4		19.7	
Continuous Variables	Overall Mean	Overall SD	Mean	SD	Mean	SD	Mean	SD
Push Motivations	4.2	2.3	4.1	2.3	4.8	2.2	3	1.9
Pull Motivations	1.7	1.5	1.7	1.4	1.4	1.3	2.5	1.7
Nights	6.6	11.8	4.3	2.4	3.7	2.4	17.0	23.5
Categorical Variables	n	%	n	%	n	%	n	%
Age								
18-24	117	20.6	16	6.9	89	39.7	12	10.7
25-34	181	31.8	68	**29.2**	109	**48.7**	4	3.6
35-44	86	15.1	50	21.5	17	7.6	19	17.0
45-54	83	14.6	56	24.0	7	3.1	20	17.9
55-64	68	12	30	12.9	2	0.9	36	**32.1**
65+	34	6	13	5.6	0		21	18.8
Income								
< $20,000	109	19.2	3	1.3	85	**37.9**	21	18.8
$20,000-$39,999	81	14.2	21	8.8	35	15.6	26	**23.2**
$40,000-$59,999	75	13.2	27	11.3	35	15.6	20	17.9
$60,000-$79,999	74	13	29	12.1	24	10.7	20	17.9
$80,000-$99,999	85	14.9	48	20.1	24	10.7	13	11.6
$100,000+	145	25.5	111	**46.4**	21	9.4	12	10.7
Origin								
Europe	208	36.6	50	21.5	158	**70.5**	0	
New South Wales	135	23.7	81	**34.8**	29	12.9	25	22.3
Queensland	92	16.2	45	19.3	1	0.4	46	**41.1**
Victoria	53	9.3	31	13.3	0		22	19.6
Nth America	38	6.7	10	4.3	25	11.2	3	2.7
Aus (not specified)	29	5.1	10	4.3	3	1.3	16	14.3
Asia Pacific	14	2.5	6	2.6	8	3.6	0	
Daily Accommodation Expenditure								
< $50	289	50.8	15	6.4	181	**80.8**	93	**83.0**
$50-$99	88	15.5	34	14.6	39	17.4	15	13.4
$100-$149	77	13.5	70	**30.0**	4	1.8	3	2.7
$150-$199	55	9.7	55	23.6	0		0	
$200 +	60	10.5	59	25.3	0		1	0.9
Daily Activities Expenditure								
< $50	208	36.6	45	19.3	82	**36.6**	81	**72.3**
$50-$99	157	27.6	58	**24.9**	75	33.5	24	21.4
$100-$149	98	17.2	57	24.5	36	16.1	5	4.5
$150-$199	51	9	37	15.9	14	6.3	0	
$200 +	55	9.7	36	15.5	17	7.6	2	1.8
Daily Food and Beverages Expenditure								
< $50	285	50.1	20	8.6	176	**78.6**	89	**79.5**
$50-$99	163	28.6	99	**42.5**	44	19.6	20	17.9
$100-$149	82	14.9	77	33.0	3	1.3	2	1.8
$150-$199	16	8.4	15	6.4	1	0.4	0	
$200 +	23	4	22	9.4	0		1	0.9
TPC								
Couple	219	38.5	99	**42.5**	63	28.1	57	**50.9**
Adult Group	168	29.7	43	18.5	116	**51.8**	9	8.0
Family	102	17.9	80	34.3	6	2.7	16	14.3
By myself	64	11.2	5	2.1	39	17.4	20	17.9
Other	16	2.8	6	2.6	0		10	8.9

TABLE 4
PUSH AND PULL MOTIVATIONS

	Total	Wealthy Travelers %	Young Europeans %	Long Stay Travelers %	Sig.
Push Motivations					
To go to a place where you have not been before	**56.1**	50.2	**77.7**	25.0	.000**
To rest and relax	54.8	**62.2**	42.9	**63.4**	.000**
To have fun	52.2	44.6	**68.3**	35.7	.000**
To go sightseeing	52.0	51.5	**62.9**	31.3	.000**
To see something different	45.0	42.1	59.8	21.4	.000**
To escape from your everyday lifestyle	42.4	37.8	50.9	34.9	.004*
To spend time with your partner	29.3	35.6	26.3	22.3	.018*
To experience a different culture	24.4	12.9	45.5	6.3	.000**
To participate in recreational activities	21.3	22.7	25.9	8.9	.001**
To be together with your family	20.7	30.5	3.6	34.8	.000**
To get away from the demands of home	18.1	21.0	14.7	18.8	.213NS
Pull Motivations					
The weather	**33.0**	**33.5**	25.9	**46.4**	.001**
It was recommended by someone	26.7	24.0	**35.3**	15.2	.000**
To experience a relaxed lifestyle	18.6	21.5	6.7	**36.6**	.000**
It is a convenient stop over point	18.1	12.0	25.4	16.1	.001**
The untouched nature	16.9	17.6	19.2	10.7	.137NS
There's a variety of things to see and do	12.3	15.0	5.8	19.6	.000**
To go camping	11.4	3.0	14.3	23.2	.000**
It is a family orientated destination	10.2	10.7	.4	28.6	.000**
The safe environment	7.7	6.9	1.3	22.3	.000**
The competitive price	7.2	10.7	3.6	7.1	.013*
The friendly locals	6.7	4.7	2.7	18.8	.000**
The luxury accommodation	5.8	12.0	1.3	1.8	.000**

** Significant at the $p < .001$
* Significant at the $p < .05$
NS Not significant

TABLE 5
DMO SEGMENTS

Segment			Characteristics					Size of segment	
Segment Number	Lifestage	Source Market	Age	Household Income	Travel Party	Transport	Type Of Trip	QLD preferrers	Destination preferrers
1	45 years plus	Brisbane	45+	Over $60K	Couples, some family and friends groups	Car, fly	Short break or 1-2 weeks	409,000 (19% of intrastate QLD preferrers)	113,000 (20% of intrastate destination preferrers)
2	Young Parents	Brisbane	25-45	Over $60K	Family	Car, fly	Short break or 1-2 weeks	272,000 (13% of intrastate QLD preferrers)	83,000 (15% of intrastate preferrers)
3	45 years plus	Regional QLD (excl. Brisbane)	45+	Up to $60K	Couples, some family and friends groups	Car, fly	Short break or 1-2 weeks	490,000 (23% of intrastate QLD preferrers)	107,000 (19% of intrastate destination preferrers)
4	Young Parents	Regional QLD (exclu. Brisbane)	20-45	Up to $70K	Family	Car	Short break or 1 week	366,000 (17% of intrastate QLD preferrers)	115,000 (20% of intrastate destination preferrers)
5	Young Parents and Midlife Households	Sydney	25-64	Over $60K	Couples and family, some friends and groups	Car, fly/drive	Short break or 1-3 weeks	847,000 (15% of interstate QLD preferrers)	111,000 (17% of interstate destination preferrers)

Biographical Notes

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Narelle Beaumont is a lecturer in the School of Management and Marketing, University of Southern Queensland. She holds a PhD from Griffith University. Her research interests include ecotourism and environmental attitudes, visitor management in protected areas, and community and local government involvement in tourism planning.

[i]Our literature review was limited to academic studies, which are readily accessible. We acknowledge it is possible that destinations may have segmented their markets using a stakeholder approach and that these may not be reported in the academic literature.

[ii]These segments were based on the findings of the standardized National Visitor Survey designed by Tourism Australia. It is used in each destination in Australia.